

NODE.JS NIGHTS

STRV

WORKERS & QUEUES

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GAME PLAN

- Worker
- Queue
- Background job
- Scheduling
- Dogbook

WORKER

“A person who does a specified type of work or who works in a specified way.”

Oxford dictionary



WORKER

- Can be of any process type declared in your Procfile
- Uses separate resources
- Runs background jobs

```
1  release: npm run db:migrate
2  web: node src/app
3  worker: node src/worker
```

BACKGROUND JOB

BACKGROUND JOB

- Execution outside the request/response lifecycle
- Long-running work
- Use case
 - Image processing
 - PDF generation
 - Fetching remote API

QUEUE



BULL

- Based on Redis
- Schedule and repeat jobs
- Priority

```
1  const Bull = require('bull')
2
3  const queue = new Bull('queue name', { redis: 'redis://127.0.0.1:6379' })
4
5  const execute = () => {
6    queue.process(job => {
7      const { data } = job
8      console.log({ data })
9    })
10 }
```

AMQPLIB

- Based on RabbitMQ
- Implements AMQP (0.9.1)
- Robust and scalable
- Supports multiple queue setups
 - Pub/Sub
 - Routing
 - RPC

```
1  const amqplib = require('amqplib')
2
3  const consume = async () => {
4    try {
5      const connection = await amqplib.connect('amqp://localhost')
6      const channel = await connection.createChannel()
7      await channel.assertQueue('queue name', { durable: true })
8      await channel.consume('queue name', message => {
9        if (message !== null) {
10          try {
11            console.log(message.content)
12            channel.ack(message)
13          } catch (err) {
14            channel.nack(message)
15          }
16        }
17      })
18    } catch (err) {
19      console.error(err)
20      throw err
21    }
22  }
```

AND MANY MORE

- Bee
- Firebase Queue
- AWS SQS

SCHEDULING

NODE SCHEDULE

- Job scheduler
- CRON
 - <https://crontab.guru/>
- Supports Date

```
1  const schedule = require('node-schedule');
2
3  const job = schedule.scheduleJob('42 * * * *', () => {
4    |   console.log('The answer to life, the universe, and everything!')
5    | })
```


BULL

- A job can be processed repeatedly
- CRON

```
1  const Queue = require('bull')
2
3  const queue = new Bull('queue name', { redis: 'redis://127.0.0.1:6379' })
4  queue.add({ data: 42 }, { repeat: { cron: '42 * * * *' } })
```

DOGBOOK

WHAT WE'VE LEARNED TODAY

- What's workers
- Why to use background jobs
- How to pass message to job
- How to schedule jobs

THAT'S IT

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QUESTIONS

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